

5/2

DART AEROSPACE LTD	Work Order:	24377
Description: Wearplate	Part Number:	D3319-3
B Dwg: D3319 Rev. A page 2, 5 05.10.03	Qty:	4
		Page 1 of 1


Step	Location	Procedure	By	Date	Qty
1	DC	Issue Traveler	PH	05.10.03	4
2	PG	Issue P/O: 2428540 Email or Ship DXF file to vendor Laser Cut flat pattern per Dwg D3319 Possible Supplier: Industrial Laser Material release note is required	U	05.09.23	4
3	RG	Receive and inspect for transit damage Ensure material release note is attached	CL	05/09/28	4
4	QC6	Inspect dimensions as per inspection template D3319-3T1	CL	05.11.15	4
5	GA	Deburr if necessary	N/A		
6	GB	Form using DT8326 & DT8261 as per Dwg D3319 Dwg Rev: B	SB	05/11/15	4
7	QC6	Inspect dimensions as per Dwg D3319	CL	05.11.15	4
8	WS	Weld hard surface using D3319-3T2 as per QSI 004 and Dwg D3319 Dwg Rev: B Qty Part Number Description Batch A/R N/A 7560 Hardcoat Rod 119172	CDL	05.12.06	4
9	QC9	Inspect weld	PH	05/12/07	4
10	FP	Powder Coat Grey Sandtex (Ref: 4.3.5.6) as per QSI 005 4.3	PH	05.12.21	4
11	QC3	Inspect Powder Coat	CL	06/01/04	4
12	ST	Identify on inside surface using a permanent fine point marker with the following: TCCA-PDA, Dart Aerospace Ltd. P/N: D3319-3, B/N: BXXXXX For Product Eligibility see PDA 1-18 PDA 05-18 and Stock 10073	PH	06/02/04	(4)
13	AC	Cost / part:	Sub	06/01/05	1
14	DC	Close W/O Inspect Level 21	PH	06/01/05	(4)

Rev	Date	Change	Revised By	Approved
A	05.05.12	New issue	KJ/JLM	PH

PRELIMINARY ISSUE

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Mfg / Design Mgr	Approval QC Inspector

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Design Mgr	Approval QC Inspector
			Initial Design Mgr	Action Description Design Mgr	Sign & Date			

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes ☒ No ☐ DQA:  Date: 06/01/15

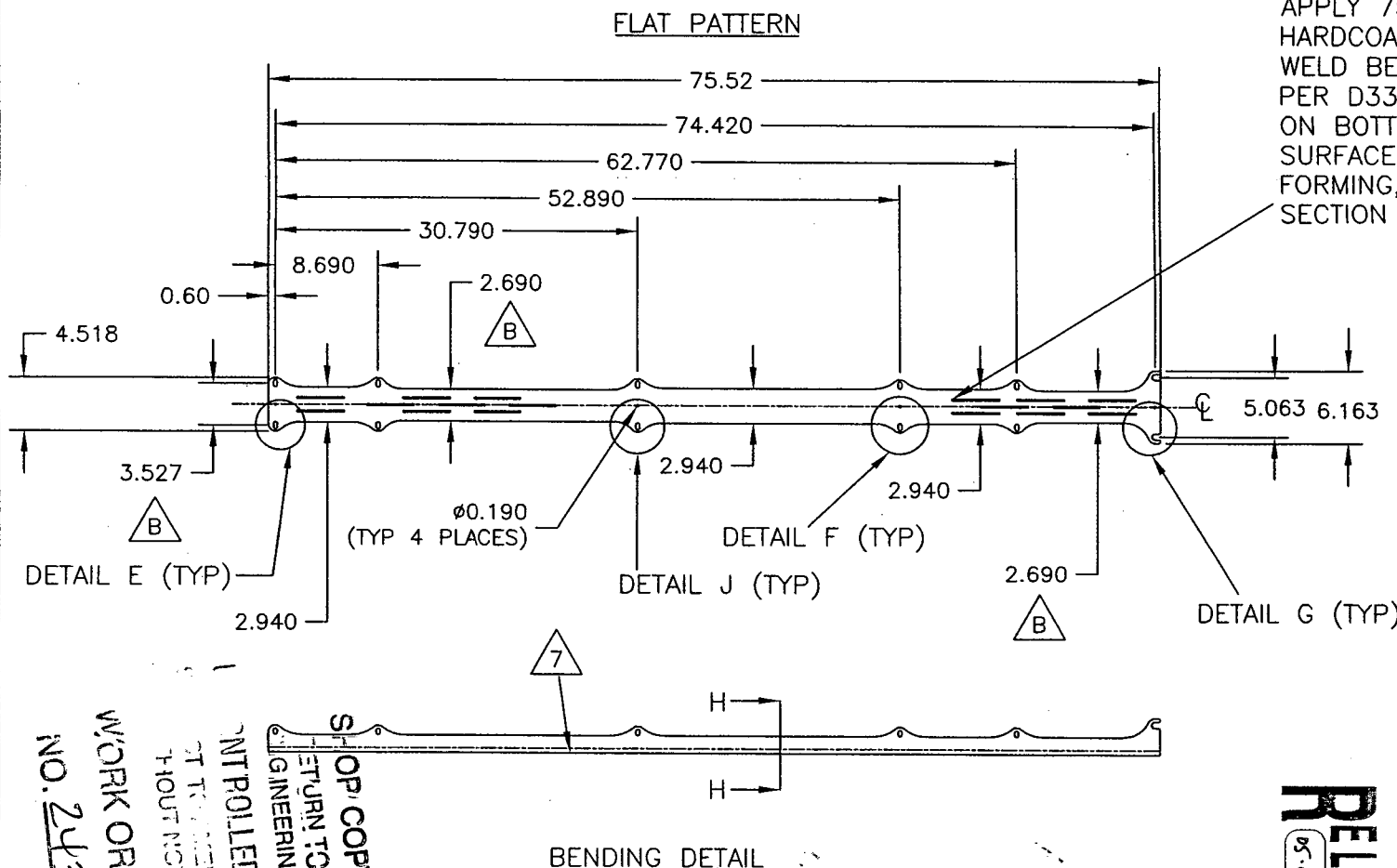
NOTE: Date & initial all entries

QA: N/C Closed: _____ Date: _____

DART

DESIGN	DRAWN BY	DART AEROSPACE LTD	
04	04	HAWKESBURY, ONTARIO, CANADA	
CHECKED	APPROVED	DRAWING NO.	REV. B
05.06.06	04	D3319	SHEET 2 OF 5
DATE	TITLE	SCALE	
	WEARPLATE	1:15	

APPLY 7560
HARDCOAT
WELD BEADS
PER D3319-3T1
ON BOTTOM
SURFACE AFTER
FORMING, SEE
SECTION H-H



NO. 24377
WORK ORDER
CONTROLLED COPY
RETURN TO
ENGINEERING
WITHOUT NOTICE

D3319-3 WEARPLATE

- 1) MATERIAL: AISI 1010-1025 OR ASTM A36/A366/A1008 OR CSA G40-21, 38W/44W/50W/60W/70W SERIES STEEL 18 GAUGE (0.048 THICK)
- 2) FINISH: POWDER COAT GREY SANDTEX (REF.4.3.5.6) PER DART QSI 005 4.3
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) PART IS SYMMETRICAL ABOUT CENTERLINE
- 5) ALL DIMENSIONS IN INCHES
- 6) WELD PER DART QSI 004
- 7) IDENTIFY ON INSIDE SURFACE AS INDICATED USING FINE POINT PERMANENT INK MARKER:
"TCCA-PDA, DART AEROSPACE LTD., P/N D3319-3 B/N BXXXXX,
FOR PRODUCT ELIGIBILITY SEE PDA05-18"

RELEASED
05-07-30

Job Costing Report

Dart Aerospace Ltd.
Hawkesbury

Sep 30, 2005
09:27 am

Work Order No : 0024377
Project Name : D3319-3
Project For : WK539
Work Order Type : Main
Main WO Number :
House Part Number : D3319-3
Description : Wearplate
Manufactured : Yes
Amount Req'd : 4
Amount Done : 0
Start Date : 09-30-05
Est Finish Date : 09-30-05
Act Finish Date :
Drawings Req'd : No
Ok for Approval :
Approval Rec'd :

Department Code:
Burden Flags : NNNNNNNN
WO Status : Open
Invoice State : Not Invoiced
Invoice Date :
Invoice Number :
Invoice Amount : 0.00

Order Entry No :
OE Value : 0.00

Est Mark Up : 0.000%
Actual Mark Up : 0.000%

\$0 Posted to Finished Goods

	Estimated	Actual	Var. %	Posted	To Post
Material Cost :	0.00	0.00	0.00	0.00	0.00
Engineering Hours :	0.00	0.00	0.00		
Engineering Cost :	0.00	0.00	0.00	0.00	0.00
Production Hours :	0.00	0.00	0.00		
Production Cost :	0.00	0.00	0.00	0.00	0.00
Packaging Hours :	0.00	0.00	0.00		
Packaging Cost :	0.00	0.00	0.00	0.00	0.00
OverHead Hours :	0.00	0.00	0.00		
OverHead Cost :	0.00	0.00	0.00	0.00	0.00
CNC Hours :	0.00	0.00	0.00		
CNC :	0.00	0.00	0.00	0.00	0.00
Misc. Hours :	0.00	0.00	0.00		
Misc. :	0.00	0.00	0.00	0.00	0.00
Burden :	0.00	0.00	0.00		
Total Cost :	0.00	0.00	0.00		
Mark up :	0.000	0.000			
Selling Cost :	0.00	0.00			

	Estimated	Actual
Labour Hrs/Amount Done :	0.00	0.00
Profits/(Loss) :	0.00	0.00



New Zealand Steel Limited
Glenbrook, South Auckland
Postal: Private Bag 92121, Auckland, New Zealand
Telephones: (09) 375 8999 / 375 8111 Auckland
(09) 235 8089 / 235 3535 Waikato
Fax: (09) 375 8959

TEST CERTIFICATE

Ref: 5005/21329

CUSTOMER		Wilkinson		P41007DI002		SPECIFICATION		ASTMA1008 CS Type A		CERTIFICATE No		TC107797												
CUSTOMER ON		90-21N-288				PRODUCT		CRA WIDE COIL		PAGE		1 of 1												
MILL ON		453666				DIMENSIONS		0.044" x 48" x Coil		DATE		31 March 2005												
PACK NUMBER	HEAT No	CHEMICAL COMPOSITION PERCENT														MECHANICAL TESTS (TEST SPECIFICATION - ASTMA370)								
		C	SI	Mn	P	S	Cu	Ni	Cr	Mo	V	Nb	Ti	Al	B	N2	CE ()	BEND	YIELD	T.S.	%ELONG	HARDNESS	r	LENGTH
		x100				x1000										x10000		x100		180°			G.L. ^a	HRB
R9-455948-00	639184	6	1	20	12	16	12	18	26	4	7	1	1					Good				49		1729
R9-455949-00	639184	6	1	20	12	16	12	18	26	4	7	1	1					Good				49		1296
R9-455951-00	638405	5	1	20	13	19	12	19	17	1	5	1	1					Good				49		2064
R9-456216-00	638526	6	TR	20	12	18	12	18	18	4	6	1	1					Good				54		1926
R9-456217-00	638526	6	TR	20	12	18	12	18	18	4	6	1	1					Good				54		1978
R9-456218-00	636939	5	TR	20	12	20	13	17	25	TR	8	1	1					Good				52		1926
R9-456219-00	636939	5	TR	20	12	20	13	17	25	TR	8	1	1					Good				52		1978

YIELD . (A)=0.2% PROOF STRESS (B)=LOWER YIELD STRESS	GAUGE LENGTH (G.L.) (A)=200mm (C)=80mm (E)=2" (B)=50mm (D)=5.65 : So (F)=8"	PLASTIC STRAIN RATIO (r) (A)=0 (C)=r45 (B)=r90 (D)=(r0+r90+2r45) / 4	IMPACT TEST (A)=10mm x 10mm (B)=7.5mm x 10mm	(C)=5mm x 5mm (D)=2.5mm x 10mm (E)=5mm x 10mm	CARBON EQUIVALENT VALUE (CE) (A)=C+Mn/6 (B)=C+Mn/6+(Cr+V+Mo)/5+(Cu+Ni)/15 (C)=C+Mn/6+Si/24 (D)=
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WE HEREBY CERTIFY THAT THE MATERIAL DESCRIBED HEREIN HAS BEEN TESTED AND INSPECTED
WITH SATISFACTORY RESULTS IN ACCORDANCE WITH THE REQUIREMENTS OF THE ABOVE SPECIFICATION

APPROVED

Satish Misra
QC METALLURGIST

18 ga CRMS

Date: Thursday, 11/17/2005 12:12:11 PM
User: Linda Lacelle

Process Sheet

Customer :	CU-DAR001 Dart Helicopters Services	Drawing Name :	WEARPLATE	
Job Number :	24377	Part Number :	D33193	
Estimate Number :	10606	Drawing Number :	D3319 REV. B	
P.O. Number :		Project Number :		
This Issue :	11/17/2005	S.O. No. :		
Prsht Rev. :	NC	Drawing Revision :	B	
First Issue :	/ /	Type :	PURCHASED PARTS	
Previous Run :	23341	Material :		
Written By :			Due Date :	11/24/2005
Checked & Approved By :			Qty:	4 Um: Each
Comment :	Est: A 05.05.12 New issue KJ/JLM			

Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
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1.0	PG	PURCHASING
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Comment: PURCHASING

Issue P/O: _____
Email or Ship DXF file to vendor
Laser Cut flat pattern per Dwg D3319
Possible Supplier: Industrial Laser
Material release note is required

2.0	D33193F	Wearplate
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3.0	PACKAGING 1	PACKAGING RESOURCE #1
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Comment: PACKAGING RESOURCE #1

Recieve & Inspect for Transit Damage
Ensure Material Release Note is attached

4.0	QC6	DIMENSIONAL CHECK
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Comment: DIMENSIONAL CHECK

Inspect dimensions as per inspection template D3319-3T1

5.0	SMALL FAB 1	SMALL & MEDIUM FAB RESOURCE 1
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Comment: SMALL & MEDIUM FAB RESOURCE 1

Deburr if necessary

6.0	BRAKE NC	NC BRAKE
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Comment: NC BRAKE

Form using DT8326 & DT8261 as per Dwg D3319 Rev: _____

Date: Thursday, 11/17/2005 12:12:11 PM
User: Linda Lacelle

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: WEARPLATE

Job Number: 24377

Part Number: D33193

Job Number:



Seq. #:

Machine Or Operation:

Description :

7.0

QC6

DIMENSIONAL CHECK



Comment: DIMENSIONAL CHECK

8.0

LARGE FAB 1

LARGE FABRICATION RESOURCE 1



Comment: LARGE FABRICATION RESOURCE 1

Weld hard surface using D3319-3T2 per QSI 004 and Dwg D3319 Rev: ____

Qty	Part Number	Description	Batch
-----	-------------	-------------	-------

A/R	N/A	7560 Hardcoat Rod	_____
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9.0

QC9

VISUAL WELDING INSPECTION



Comment: VISUAL WELDING INSPECTION

10.0

POWDER COATING

POWDER COATING



Comment: POWDER COATING

Powder Coat Grey Sandtex (Ref: 4.3.5.6) as per QSI 005 4.3

11.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT

12.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify on inside surface using a permanent fine point marker with the following:

TCCA-PDA, Dart Aerospace Ltd.

P/N: D3319-3, B/N: BXXXXX

For Product Eligibility see PDA05-18

and Stock

Location: _____

13.0

DC

DOCUMENT CONTROL



Comment: DOCUMENT CONTROL

Inspection Level 21

Job Completion



Job Costing Report

Dart Aerospace Ltd.
Hawkesbury

Nov 08, 2005
11:52 am

Work Order No : 0024377
Project Name : D3319-3
Project For : WK539
Work Order Type : Main
Main WO Number :
House Part Number : D3319-3
Description : Wearplate
Manufactured : Yes
Amount Req'd : 4
Amount Done : 0
Start Date : 09-30-05
Est Finish Date : 09-30-05
Act Finish Date :
Drawings Req'd : No
Ok for Approval :
Approval Rec'd :

Department Code:
Burden Flags : NNNNNNNN
WO Status : Open
Invoice State : Not Invoiced
Invoice Date :
Invoice Number :
Invoice Amount : 0.00
Order Entry No :
OE Value : 0.00
Est Margin : 0.000%
Actual Margin : 0.000%
\$0 Posted to Finished Goods

	Estimated	Actual	Var. %	Posted	To Post
Material Cost :	0.00	154.88	100.00	0.00	154.88
Engineering Hours :	0.00	0.00	0.00		
Engineering Cost :	0.00	0.00	0.00	0.00	0.00
Production Hours :	0.00	0.00	0.00		
Production Cost :	0.00	0.00	0.00	0.00	0.00
Packaging Hours :	0.00	0.00	0.00		
Packaging Cost :	0.00	0.00	0.00	0.00	0.00
OverHead Hours :	0.00	0.00	0.00		
OverHead Cost :	0.00	0.00	0.00	0.00	0.00
CNC Hours :	0.00	0.00	0.00		
CNC :	0.00	0.00	0.00	0.00	0.00
Misc. Hours :	0.00	0.00	0.00		
Misc. :	0.00	0.00	0.00	0.00	0.00
Burden :	0.00	0.00	0.00		
Total Cost :	0.00	154.88	100.00		
Margin :	0.000	0.000			
Selling Cost :	0.00	154.88			

	Estimated	Actual
Labour Hrs/Amount Done :	0.00	0.00
Profits/(Loss) :	0.00	(-154.88)